

**ABSTRACT OF THE DISCLOSURE**

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The present invention provides a human guanosine monophosphate reductase (HGMPR) and polynucleotides which identify and encode HGMPR. The invention also provides genetically engineered expression vectors and host cells comprising the nucleic acid sequences encoding HGMPR and a method for producing HGMPR. The invention also provides for agonists, antibodies, or antagonists specifically binding HGMPR, and their use, in the prevention and treatment of diseases associated with expression of HGMPR.

Additionally, the invention provides for the use of antisense molecules to polynucleotides encoding HGMPR for the treatment of diseases associated with the expression of HGMPR.

The invention also provides diagnostic assays which utilize the polynucleotide, or fragments or the complement thereof, and antibodies specifically binding HGMPR.